

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027916**Date Inspected:** 05-Jul-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted below.**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower Component**Summary of Items Observed:**

Quality Assurance Inspector (QA) William Clifford was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

**Ultrasonic Testing of ESW****ESW G, Face A:**

This QA performed Ultrasonic Testing (UT) on approximately 1000mm of Tower Electroslag Complete Joint Penetration (CJP) shear plate weld designated as "ESW G" face A. Location (Y=6000~7000) of this weld was inspected using this testing method.

This weld was previously accepted by QC Ultrasonic technicians in accordance with supplemental procedure SE-UT-D1.5-CT-108-ESW-R5.

This QA observed one (1) recordable indication at the time of testing.

This QA generated a TL-6027 UT report on this date.

The following indications were observed as having a transverse orientation. Due to joint configuration and weld cap shape these indications could not be evaluated for length or "X" location.

Indication #1: Y= 6670mm

Sizing – A=80.5db, B= 54db, C= 6db, D= 20.5db

Sound Path= 101.6mm, Depth= 34.25mm

Note: This location appeared to be a grouping of two (2) or more transverse indications.

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Indication #2: Y=6380 mm

Sizing – A= 74db, B= 54db, C= 7db, D= 13db

Sound Path= 113.1, Depth= 38.15mm

Indication #3: Y=6250 mm

Sizing – A= 75db, B= 54db, C= 6db, D= 15db

Sound Path= 99.43, Depth= 33.51mm

ESW G, Face B:

This QA performed Ultrasonic Testing (UT) on approximately 2560mm of Tower Electroslag Complete Joint Penetration (CJP) shear plate weld designated as “ESW G” face B. Location (Y=140~2700) of this weld was inspected using this testing method.

This weld was previously accepted by QC Ultrasonic technicians in accordance with supplemental procedure SE-UT-D1.5-CT-108-ESW-R5.

This QA observed six (6) recordable indications at the time of testing.

This QA generated a TL-6027 UT report on this date.

The following indications were observed as having a transverse orientation. Due to joint configuration and weld cap shape these indications could not be evaluated for length or “X” location.

Indication #1: Y= 260mm

Sizing – A=74db, B= 54db, C= 5db, D= 15db

Sound Path= 90.54mm, Depth= 30.51mm

Indication #2: Y=380 mm

Sizing – A= 73db, B= 54db, C= 8db, D= 11db

Sound Path= 121.1, Depth= 40.85mm

Indication #3: Y=1190 mm

Sizing – A= 78.5db, B= 54db, C= 8db, D= 16.5db

Sound Path= 120.5, Depth= 40.63mm

Indication #4: Y= 1230mm

Sizing – A=75db, B= 54db, C= 3db, D= 18db

Sound Path= 66.62mm, Depth= 22.45mm

Note: This location appeared to be a grouping of two (2) or more transverse indications.

Indication #5: Y=1520 mm

Sizing – A= 79.5db, B= 54db, C= 6db, D= 21db

Sound Path= 103.3, Depth= 34.84mm

Indication #6: Y= 1550mm

Sizing – A=72db, B= 54db, C= 5db, D= 13db

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Sound Path= 84.12mm, Depth= 28.35mm

Note: This location appeared to be a grouping of two (2) or more transverse indications.

Indication #7: Y=1640 mm

Sizing – A= 79db, B= 54db, C= 8db, D= 17db

Sound Path= 127.0, Depth= 42.81mm

Indication #8: Y=1710 mm

Sizing – A= 79.5db, B= 54db, C= 4db, D= 21db

Sound Path= 75.05, Depth= 25.30mm

Indication #9: Y=1730 mm

Sizing – A= 76.5db, B= 54db, C= 8db, D= 14db

Sound Path= 127.5, Depth= 43.0mm

Indication #10: Y=1890 mm

Sizing – A= 78db, B= 54db, C= 6db, D= 18db

Sound Path= 95.54, Depth= 32.20mm

This QA performed UT of weld designated as ESW G in accordance with the approved supplemental procedure. This testing was performed in tandem with QC technician Scott Kortum.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

Conversations were relevant to testing performed.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Clifford, William	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell, Bill	QA Reviewer

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